IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Solar feed-in tariffs

The subsidy-free value of electricity from small-scale solar PV units from 1 July 2014

Electricity — Issues Paper
November 2013

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Energy — Issues Paper
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Invitation for submissions

IPART invites written comment on this document and encourages all interested parties to provide submissions addressing the matters discussed.

Submissions are due by 31 January 2014.

We would prefer to receive them electronically via our online submission form <www.ipart.nsw.gov.au/Home/Consumer_Information/Lodge_a_submission>.

You can also send comments by mail to:

2014/15 Solar Feed-in Tariff Review
Independent Pricing and Regulatory Tribunal
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Late submissions may not be accepted at the discretion of the Tribunal. Our normal practice is to make submissions publicly available on our website <www.ipart.nsw.gov.au> as soon as possible after the closing date for submissions. If you wish to view copies of submissions but do not have access to the website, you can make alternative arrangements by telephoning one of the staff members listed on the previous page.

We may choose not to publish a submission—for example, if it contains confidential or commercially sensitive information. If your submission contains information that you do not wish to be publicly disclosed, please indicate this clearly at the time of making the submission. IPART will then make every effort to protect that information, but it could be disclosed under the *Government Information (Public Access) Act 2009* (NSW) or the *Independent Pricing and Regulatory Tribunal Act 1992* (NSW), or where otherwise required by law.

If you would like further information on making a submission, IPART's submission policy is available on our website.

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1 Introduction

In NSW, small electricity customers with solar photovoltaic units (PV customers) can earn feed-in tariffs for the electricity they export to the grid. The Independent Pricing and Regulatory Tribunal (IPART) has an ongoing role in relation to these feed-in tariffs. The NSW Government has asked us to conduct annual reviews to determine:

1. A benchmark range for the unsubsidised feed-in tariffs that some electricity retailers voluntarily offer PV customers who **are not** part of the Solar Bonus Scheme (**the benchmark range**).
2. The amount NSW electricity retailers must contribute towards the subsidised feed-in tariffs that the Government must offer PV customers who **are** part of the Solar Bonus Scheme (**the retailer contribution**).

(See Box 1.1 for more information about these feed-in tariffs, and IPART's reviews.)

We are about to undertake our 2014 review, which will set the benchmark range and retailer contribution for 2014/15. This issues paper explains the terms of reference and the scope of this review. It also outlines the approach and methodologies we propose to use, and discusses the key issues we will consider as part of the 2014 review.

We invite all interested parties to make submissions in response to this paper. We are interested in stakeholders' views on the issues raised in the paper, and on other issues they consider relevant. However, we ask that in making submissions, stakeholders take account of our terms of reference (provided in Appendix A).

These terms of reference are very specific. For example, they require us to determine the benchmark range and retailer contribution using the methodologies we established in 2012. We must also ensure that our determination does not increase retail electricity prices, and supports competition in the retail electricity market. This means there is no scope for us to consider establishing mandatory feed-in tariffs for PV customers outside the Solar Bonus Scheme. However, there is some scope to consider whether we can improve the established methodologies and make them more robust.

Box 1.1 What has IPART been asked to do?

Solar feed-in tariffs review

Households with solar units earn feed-in tariffs for energy that is exported to the grid. Some customers are eligible for a subsidised feed in tariff under the Solar Bonus Scheme. Other solar customers who are not eligible under the Solar Bonus Scheme need to assess feed-in tariff offers in the market. IPART has been asked to investigate feed-in tariffs for both groups.

RETAILER CONTRIBUTION TO THE SOLAR BONUS SCHEME

The Solar Bonus Scheme offered subsidised feed-in tariffs of 60 or 20 c/kWh for the energy supplied to the network from solar panels, depending on date of connection. This scheme is now closed to new participants.

The scheme is paid for in two ways:

- A levy on all electricity customers that is recovered through electricity prices, and
- A contribution from retailers, that reflects the value of the exported electricity to the retailer.

IPART sets the amount that retailers must contribute towards the subsidised scheme.

This 'retailer contribution' lessens the levy that is paid by all electricity customers, and means that electricity prices do not need to be as high as they would otherwise be.

IPART's decision does not affect the statutory feed-in tariff rates that customers receive (either 60c or 20c/kWh), as that has already been set at the time of connection.

BENCHMARK FEED-IN TARIFFS

Most consumers with solar panels first consume the energy that they produce and export only excess energy, so the bulk of the savings they make are from buying less energy from retailers.

Customers not eligible for the subsidised feed-in tariff can receive a feed-in tariff for the energy they export to the network directly from their retailer. These feed-in tariffs are set by retailers operating in the competitive market.

Customers can compare feed-in tariff offers on the www.energymadeeasy.gov.au website in the same way all energy and gas consumers can compare prices and overall packages to find the best deal for them.

IPART's review will value the energy that is exported to determine a fair and reasonable feed-in tariff.

The benchmark rate is only a guide for retailers and consumers, and is not mandatory.

1.1 How will we conduct this review?

To conduct this review, we will undertake public consultation and detailed analysis. The table below provides an indicative timetable for our process.

Table 1.1 Indicative review timetable

Key tasks	Timing
Release issues paper	27 November 2013
Receive submissions issues paper (due date)	31 January 2014
Release draft report	April 2014
Hold public forum on draft report and determination	May 2014
Receive submissions on draft report	May 2014
Release final report and determination	**June 2014**

1.2 What does the rest of this paper cover?

The chapters that follow provide information to assist stakeholders in making submissions to the review:

- Chapter 2 explains the terms of reference and clarifies what issues are outside the scope of this review
- Chapter 3 outlines the methodologies and approaches we use to make our determination, and identifies the issues on which we particularly seek stakeholder comment.

The appendices include a copy of our terms of reference, as well as some background information on the Solar Bonus Scheme and our previous reviews of solar feed-in tariffs.

Note that throughout this paper we refer to all customers with solar PV units as PV customers. Within this group, we refer to those who are participants in the Solar Bonus Scheme as SBS customers, and those who are not as non-SBS customers.

1.3 Overview of issues on which IPART seeks comment

Throughout this paper, we have identified issues on which we particularly seek stakeholder comment at this stage of the review. Stakeholders may address all or some of these issues, and are also free to raise and discuss any other issues that they feel are relevant to the terms of reference. For convenience, a full list of the issues we seek comment on is provided below.

IPART seeks comments on the following

Estimating the wholesale market value of solar PV exports

Estimating the direct financial gain to retailers

Setting the retailer contribution and benchmark range

2 Context and scope for this review

IPART first reviewed solar feed-in tariffs in 2011/2012. Our terms of reference for this review were fairly broad. However, they included 2 key requirements: that our recommendations must not lead to higher retail electricity prices, and must support competition in the retail market.

After extensive consultation and analysis, we found that setting mandatory feed-in tariffs for customers outside the Solar Bonus Scheme would **not** meet these requirements. Instead, we recommended that NSW retailers be encouraged to voluntarily offer an unsubsidised feed-in tariff to these non-SBS customers, and

we should set a benchmark range for this tariff to assist customers in comparing retail offers. We also recommended that NSW retailers be required to make a contribution towards the subsidised feed-in tariffs paid to customers **inside** the Solar Bonus Scheme. In addition, we recommended an approach and methodologies for determining the values of the benchmark range and retailer contribution. (See Appendix B for more information.)

The Government accepted these recommendations, and subsequently asked us to conduct annual reviews to update the values of the benchmark range and retailer contribution each year. The terms of reference for these annual reviews are much narrower than those of our first review, and limit the scope of issues we can consider.

2.1 Our terms of reference

The terms of reference for our annual solar reviews do not ask us to reconsider the broad issues we examined as part of our 2012 review. Essentially, they ask us to:

- update the benchmark range and the retailer contribution using the same methodology as we used in making our 2012/13 determination
- ensure there is no resulting increase in retail electricity prices
- ensure the benchmark range operates in a way that supports a competitive electricity market in NSW.

These terms of reference mean that many of the issues stakeholders have raised in previous reviews are outside the scope of this 2014 review (discussed further in section 2.2).

However, they do provide some scope for us to consider whether we can enhance the approach and methodologies we have used in previous reviews. Chapter 3 outlines the issues we intend to consider in relation to this approach.

2.2 Issues outside the scope of our review

As noted above, the terms of reference for this review do not provide scope for us to consider a range of issues solar industry participants and PV customers have raised in previous reviews. These include:

- Why isn't it mandatory for retailers to offer a regulated solar feed-in tariff to non-SBS customers?
- Why can't non-SBS customers get a '1-for-1' credit for their exports?
- Why aren't solar feed-in tariffs set at a level that encourages green energy?
- Why don't solar feed-in tariffs take account of PV exports' impact on wholesale electricity prices, or on the network?

However, we have carefully considered these issues in previous reviews. The sections below summarise our position on them.

2.2.1 Why isn't it mandatory for retailers to offer a regulated solar feed-in tariff to non-SBS customers?

We consider that a competitive retail electricity market provides the best form of protection for customers, including PV customers. Since competition was introduced in the NSW retail market, it has become increasingly effective. Indeed, the Australian Energy Market Commission recently found that this competition is robust and is delivering benefits to customers.[1]

In this context, we consider that retailers should have the flexibility to decide whether they will offer a feed-in tariff to non-SBS customers, and to set their own tariff. In a competitive market, the need to attract and retain customers should ensure that this tariff reflects the value of PV exports to their business.

In addition, we consider that introducing a mandatory, regulated feed-in tariff would not be in the best interest of customers. This would reduce the ability of retailers to offer a diverse range of products to their customers.[2] In addition, there is a risk that setting the mandatory rate too high would lead to less competition and/or higher retail prices for non-SBS customers. On the other hand, if it were set too low, it might prevent these customers from receiving the full value of their exported electricity.

We note that most of the large retailers currently offer a solar feed-in tariff, so most non-SBS customers should have access to a retail offer that includes a feed-in tariff. We also note that many PV customers will use most the electricity they generate in their own premises, and export only a minority to the grid. Where this is the case, the potential to earn a feed-in tariff is not the main economic reason to install a PV unit. Rather it is the potential savings on electricity bills. (See Box 2.2 for more information.)

2.2.2 Why can't non-SBS customers get a '1 for 1' credit for their exports?

Some stakeholders suggest that a fair feed-in tariff would be equal to the retail price, or a credit which they can use to offset their imports at a different time.

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1 AEMC 2013, *Review of Competition in the Retail Electricity and Natural Gas Markets in New South Wales* - Final Report, October 2013, p i.

2 For example, solar customers that consume most of their solar generation might be better off on a deal with a bigger discount off their usage rate and no feed-in tariff than they would be on a deal with a large feed-in tariff but smaller discount off their usage rate.

Requiring retailers to pay a feed-in tariff that is equal to the retail price would cause them to lose money (see Box 2.1). This is because while retailers can 'sell' PV customers' exports for the retail price, they cannot avoid most of the costs they incur when they sell electricity. These costs are significant, and therefore the value of PV customers' exports to retailers is considerably less than the retail price.

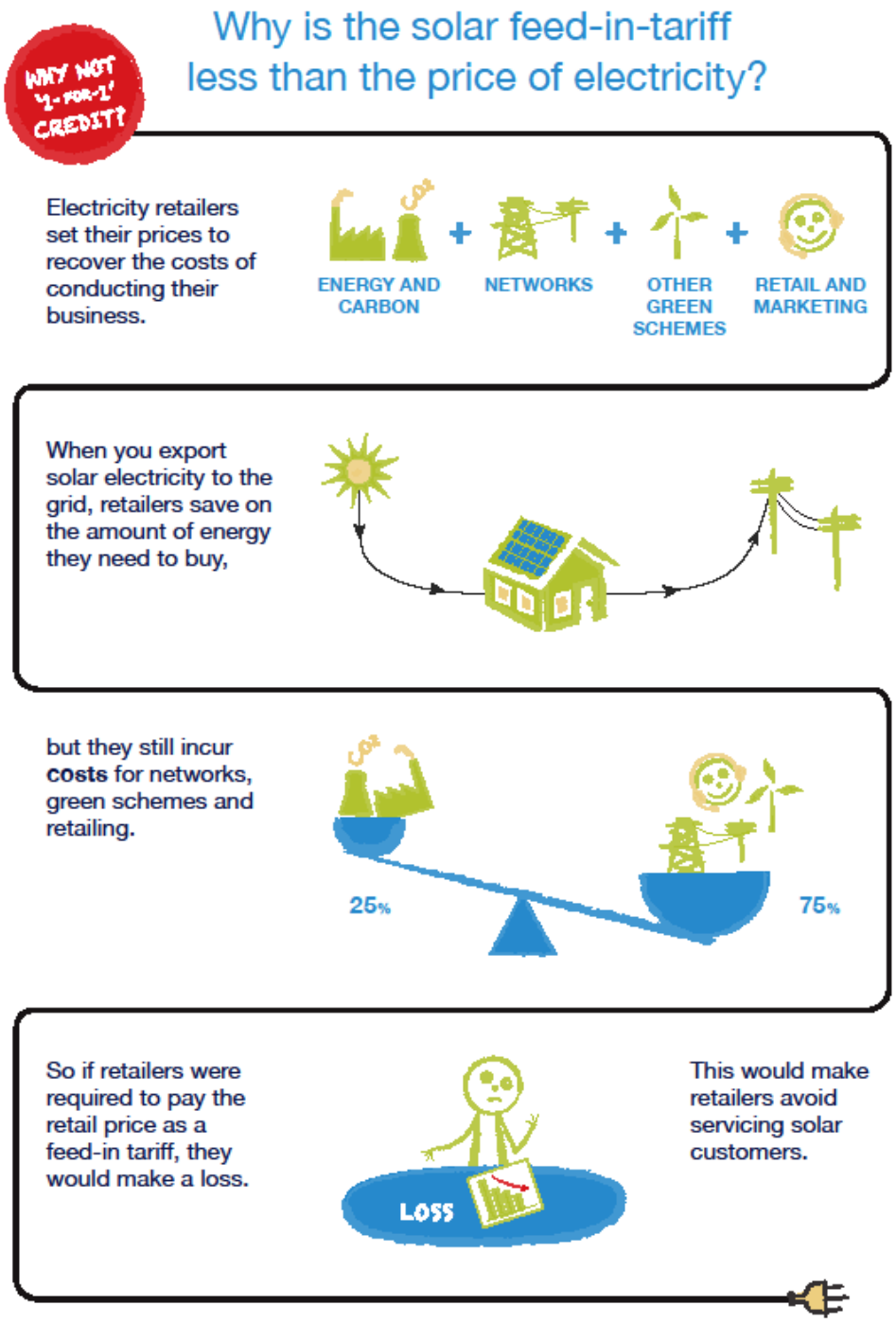
Requiring retailers to give non-SBS customers a 1-for-1 credit on their daytime exports to 'pay' for their night-time imports would also cause them to lose money. This is because due to the metering and settlement arrangements in National Electricity Market (NEM), the electricity PV customers export cannot be 'stored' in the network for them to use later – it must either be used in their premises or sold at the time of generation.

For the above reasons, paying non-SBS customers a 1-for-1 feed-in tariff, or giving them a 1-for-1 credit for their exports would lead retailers to make a loss on non-SBS customers. Alternatively, it would lead them to avoid serving non-SBS customers. This would be contrary to our terms of reference.

2.2.3 Why aren't solar feed-in tariffs set to encourage green energy?

Whether or not solar feed-in tariffs should be used as an incentive for further investment in small-scale solar generation is a policy decision, and thus is a matter for government, not IPART. However, we note that the Commonwealth Governments Renewable Energy Target Scheme already provides a financial incentive when customers install a PV unit. Even without subsidised solar feed-in tariffs there are still a range of potential financial benefits from installing a PV unit (see Box 2.2).

Box 2.1 Why don't we have a '1-for-1' feed-in tariff?



2.2.4 Why don't solar feed-in tariffs account for PV exports' impact on wholesale electricity prices?

Small-scale solar PV has the potential to lower wholesale electricity prices from what they otherwise would have been (eg, through the 'merit-order effect'). Some stakeholders have suggested that this benefit should be accounted for in estimating the value of solar PV exports (which we use to determine the benchmark range).

In our view, any benefit arising from lower wholesale prices should be shared by all customers rather than estimated and included in a feed-in tariff. This is because:

- Due to arrangements in the NEM, this benefit is not fully and directly captured by a PV customer's retailer. Rather, it is an 'external benefit' that is shared by all customers (PV and non-PV customers) reflecting the functioning of the competitive market.
- Reallocating these benefits from all customers to only PV customers would increase electricity prices for non-PV customers from what they otherwise would have been. This would be contrary to our terms of reference.

We also note that this impact is not unique to PV generation – any new generator (or new customer) entering or exiting the NEM would change the balance of supply and demand, and thus could lead to lower or higher wholesale prices. Such a generator (or customer) would not be compensated for this impact. We consider that other than through policies specifically designed to encourage more investment in small-scale PV, such as the Small-scale Renewable Energy Target, PV customers should be treated like any other generator in the competitive market.

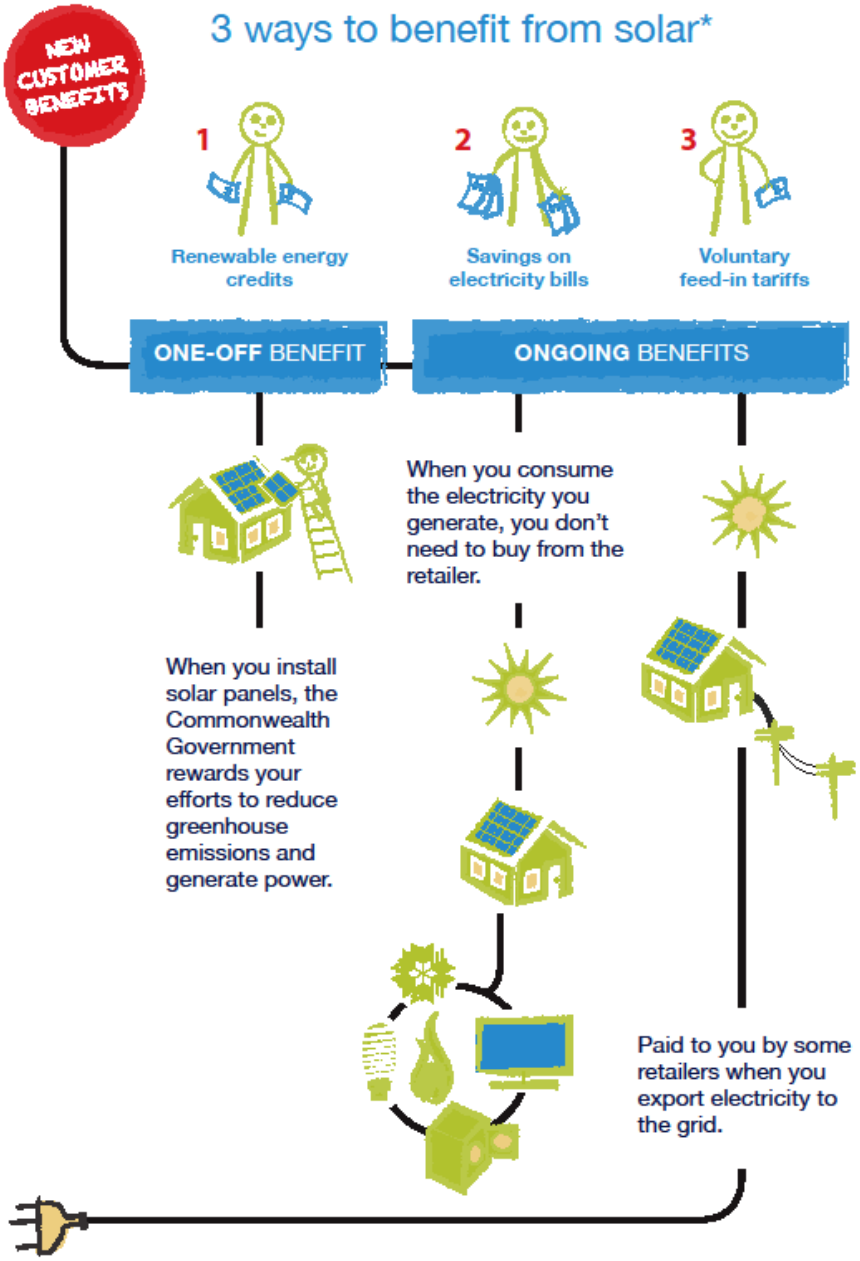
2.2.5 Why don't solar feed-in tariffs account for network benefits?

In our March 2012 report, we found that there may be some benefits (and costs) of solar PV to network businesses and these are likely to be time and location specific. However, network expenditure is largely driven by the need to meet peak demand and PV exports tend not to be at their greatest in times of peak demand. Further, solar customers imposed some additional costs on networks. Therefore, we found that PV customers are unlikely to significantly reduce network costs.[3] However, in our view generally available feed-in tariffs would not be the best way to deliver any net benefits to networks – rather location and time-specific payments could provide more appropriate incentives for PV installation. Creating the right policy and regulatory settings is a more effective means to create incentives for network businesses, PV customers and the solar

3 IPART, *Solar feed-in tariffs – Setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW – Final Report*, March 2012, pp 66-70.

industry to identify opportunities for network benefits and to receive appropriate compensation.

Box 2.2 Benefits of solar PV



3 Approaches and methodologies

As Chapter 2 discussed, the terms of reference for our 2014 solar feed-in tariff review essentially require us to determine the benchmark range and retailer contribution using same approaches as we have used in previous reviews. However, we consider there is scope for us to consider whether we can enhance these approaches to make them more robust.

In general, our current approaches involve estimating the value of customers' PV exports using 2 methodologies, and then setting the benchmark range and retailer contribution with reference to these estimates. The sections below discuss these approaches in more detail and identify the main issues on which we seek stakeholder comments.

3.1 Valuing solar PV exports

Our current approach for valuing solar PV exports is to estimate this value using 2 methodologies:

- a wholesale market value method, and
- a direct financial gains to retailers method.

3.1.1 Wholesale market value of PV exports

This methodology involves estimating the wholesale market value of PV exports assuming this electricity could be sold on the NEM. Effectively, it assumes PV customers are like other generators who sell electricity on the wholesale market. Thus, it takes into account when and where PV electricity is exported to the grid, and what the spot prices for electricity are at these times. This is consistent with the Council of Australian Government's principles for feed-in tariffs, which state that the value of PV exports should take account of the time of day that the electricity is exported.[4]

Our current method is to estimate the wholesale market value of PV exports using a historical year of half-hourly solar PV exports and corresponding spot prices. We maintain the historical correlation between PV exports and spot prices and 'scale' it to the forecast average spot price in the coming year to provide a forecast wholesale market value. Under this method, the historical year (or base year) of data we use has a large impact on the resulting forecast value. In particular, the average spot price in the middle of the day (when most PV exports occur) for this year is a significant driver of the wholesale market value.

4 See http://www.coag.gov.au/node/507

We also adjust the spot price (which is measured at the NSW regional reference node) for the network losses that would be faced by customers exporting solar PV into the market. To make this adjustment, we use the transmission and distribution losses applicable to the relevant distribution area. This has the effect of increasing the wholesale market value of solar PV exports, reflecting the benefit of being located close to where the energy is consumed (ie, avoiding these losses).

Issues with estimating the wholesale market value

We have identified 3 main issues with our current methodology for estimating the wholesale market value. First, as we noted in our 2013/14 report, its reliance on just 1-year of historical data is not ideal. This is because average spot prices can vary widely from year to year, due to factors such as variations in weather and economic conditions. Therefore, we would prefer to have regard to more historical data in estimating the wholesale market value.[5] This would make the resulting forecast value less sensitive to a particular base year, and capture a greater range of possible outcomes.

One way we could do this would be to use a simulation process to develop a large number of 'synthetic' outcomes (ie, possible wholesale market values based on different market and weather conditions). These simulations would sample from all available historical PV and spot price data, and would produce a distribution of possible outcomes. From this distribution we could select, for example, the expected outcome (a 50% probability of exceedence). This is a similar process to how Frontier Economics developed the regulated load profiles for the 2013-16 electricity determination.[6]

Second, for our 2013/14 solar review, we estimated the wholesale market value based on data for 1.5kW solar units.[7] This was the most common PV unit size and therefore likely to provide the most reliable results. However, we could estimate the wholesale market value for a range of different unit sizes. This would produce a range of wholesale market values.

Finally, because there are different metering arrangements for solar customers there are also different datasets available for estimating the wholesale market value. Gross metered customers export all the electricity their PV unit generates while net metered customers will only export if, at any point in time, they produce more electricity than they consume. This means, all else being equal, gross metered customers export more electricity than net metered customers.

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5 IPART, *Solar feed-in tariffs – the subsidy-free value of electricity from small-scale solar PV units from 1 July 2013 – Final Report*, June 2013, p 18.

6 Frontier Economics, *Energy purchase costs – A final report prepared for IPART*, June 2013, pp 9-22.

7 The data we use is from the Ausgrid network area because Ausgrid collects data on a half-hourly basis for consumption, generation and net exports from solar PV customers.

Frontier Economics examined the differences between gross and net metered datasets as part of our 2013/14 solar review. It found that the wholesale market value across gross and net metered customers is unlikely to vary significantly.[8] The wholesale market value we estimated for 2013/14 was based on a net metered profile, however we could also consider gross metered data. This may be particularly relevant for the retailer contribution as this relates to the Solar Bonus Scheme where the majority of SBS customers have gross meters.

IPART seeks comments on the following

1 How could IPART improve its methodology for estimating the wholesale market value of solar PV exports?

2 In estimating this wholesale market value:

- Should IPART continue to use a single historical base year or take account of more historical data?
- Should IPART continue to use data on 1.5kW PV units only, or take account of different PV unit sizes?
- Should IPART use a gross or net metered profile for setting the retailer contribution?

3.1.2 Direct financial gain to retailers

The second methodology we use estimates the value of solar PV exports in terms of the financial gain they provide to retailers. When a PV customer exports a kWh of electricity to the grid, its retailer supplies that electricity to another customer. In doing so, the retailer avoids some – but not all – of the costs it would incur if it purchased that kWh on the NEM. The difference between the revenue a retailer can earn from selling the electricity and the costs it **cannot** avoid represents a direct financial gain to the retailer.

Our current method is to estimate this financial gain by taking the retail price the PV customer would pay for importing electricity, then subtracting all the costs the retailer cannot avoid. In 2014/15, these costs are likely to include retail costs and margin, network costs and green scheme costs (more information on the costs retailers cannot avoid can be found in our March 2012 report).[9]

The data we use to estimate this gain is information on the Standard Retailers' PV customers on regulated prices, taken from our most recent annual review of regulated retail prices. This is the best publicly available data. For these customers, we know the retail price they pay, and the estimated cost of supply on which this retail price is based.

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8 Frontier Economics, *Market value of solar PV exports – A final report prepared for IPART*, June 2013, pp 2-6.

9 IPART, *Solar feed-in tariffs – Setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW – Final Report*, March 2012, pp 45-53.

However, we also know that estimating the direct financial gain based on regulated prices will produce an upper estimate of the financial gain to retailers in general. This is because in the competitive market, retailers generally offer a discount on the regulated price (and therefore their financial gain is smaller). To account for this, we repeat our calculations and apply a discount to the regulated usage prices. This provides an upper and lower bound for the direct financial gain.

Issues with estimating the direct financial gain

While our terms of reference for the 2014 review specify that we use the direct financial gain method, we invite comment from stakeholders on whether it is a useful way of valuing solar PV exports. Over the last couple of years, the feed-in tariffs that retailers have offered customers have generally been well below the upper bound of the direct financial gain.

One issue related to continuing to use this approach is that, because it uses approved regulated retail prices, our results can't be finalised until close to 30 June each year.[10] This leaves very little time for stakeholders to implement our decision in time for 1 July price changes. To address this, we could use our draft decision on regulated retail price changes to update the direct financial gain calculation. The main implication of this is that we would not be able to use the final approved prices in our calculations.

IPART seeks comments on the following

3 Is the direct financial gain methodology a useful approach for estimating the value of solar PV exports?

4 Should IPART's method for estimating the direct financial gain be amended so that there is more time for stakeholders to implement the decision? If so, how?

3.2 Setting the retailer contribution and benchmark range

To determine the retailer contribution, our current approach is to set this contribution in line with the lower bound of our estimate of the direct financial gain to retailers. (As discussed above, this lower bound takes account of the discounts on the regulated price retailers generally include in their market offers.) Our main reason for this approach is that because the retailer contribution is mandatory, setting it higher than a retailer's actual financial gain would create a financial incentive for it to avoid serving SBS customers.

[10] For example, in 2013/14 the results were not finalised until the last week of June.

While our terms of reference for the 2014 review specify that we have regard to the direct financial gain to retailers (including the lower bound), we have identified some practical issues with continuing to use our current method for estimating this gain (discussed above). We invite stakeholders to express their views on the most appropriate approach for determining the retailer contribution, taking into account that this contribution is mandatory.

To set the benchmark range, our current approach has been to consider our estimates of the wholesale market value of PV exports and the upper bound of the direct financial gain to retailers. We set the upper and lower bounds of the benchmark range in line with these 2 values.

However, as noted above, the feed-in tariffs that retailers have offered to non-SBS customers have generally been well below the upper bound of the benchmark range. We are interested in stakeholders' views on the appropriateness of this approach for setting the benchmark range, and whether the benchmark range provides a useful source information to the market.

IPART seeks comments on the following

5 What factors should IPART have regard to in setting the retailer contribution?

6 How effective is the benchmark range in guiding customers and retailers on the value of solar PV exports?

7 How could IPART's approach for setting the benchmark range be improved?

Appendices

A Terms of reference

Annual investigation and determination by IPART of a retailer benefit component and benchmark range for feed-in tariffs

Reference to IPART under section 43ECA of the *Electricity Supply Act 1995*

I, Chris Hartcher, Minister for Resources and Energy, refer to the Independent Pricing and Regulatory Tribunal (IPART) under section 43ECA of the Electricity Supply Act 1995 (the Act) for investigation and determination:

1) The retailer benefit component payable by a retailer to a customer for electricity produced by a complying generator and supplied to the distribution network by a customer under the Solar Bonus Scheme (the retailer contribution); and

2) The benchmark range for solar feed-in tariffs paid by retailers for electricity produced by complying generators and supplied to the distribution network (the benchmark range).

Conduct of investigation

In making its determination on the retailer contribution, IPART should have regard to the direct financial gain to retailers method including discounts for market offers as set out in its final report *Solar feed-in tariffs: setting a fair and reasonable for electricity generated by small-scale solar PV units in NSW* (March 2012) (the Final Report).

In making its determination on the benchmark range IPART should use the methodology adopted in its 2012/13 determination. IPART should take into account:

- its modeling of the wholesale market value for the relevant year as set out in its Final Report; and
- the direct financial gain to Standard Retailers for the relevant year.

In conducting this investigation IPART is to consider the following key parameters:

- there should be no resulting increase in retail electricity prices;
- the benchmark range should operate in such a way as to support a competitive electricity market in NSW

Consultation

IPART must undertake such consultation as is required under the Act and may undertake such further consultation as it considers appropriate.

Timing

IPART is to complete the investigation and provide its determination as soon as practicable following approval of regulated retail prices.

B Background on the Solar Bonus Scheme and IPART's first review of solar feed-in tariffs

To encourage NSW households and small businesses to install small-scale solar PV units, the NSW Government established the Solar Bonus Scheme in 2010. This scheme provides SBS customers with a generous subsidised feed-in tariff for the electricity they export to the grid (either 20c or 60c/kWh), and will do so until it ends on 31 December 2016.[11]

Many more households joined the scheme than expected and, as a result, its costs were higher than expected. Because these costs are funded through retail electricity prices,[12] this increased prices at a time when they were already rising due to other factors.

The Government closed the Solar Bonus Scheme to new participants in 2011, to prevent the costs from rising further. In response to our recommendation,[13] it also considered requiring retailers to make a contribution to the costs of the scheme, and asked IPART to recommend this contribution.

At the same time, the Government asked us to recommend a mechanism for establishing a **non-subsidised** solar feed-in tariff for customers who install PV units outside of the Solar Bonus Scheme (non-SBS customers), and a 'fair and reasonable' value for this tariff. The terms of reference it provided specified that this mechanism and value must not increase retail electricity prices, and must support competition in the retail electricity market.

We delivered our final report to the Government in March 2012, and recommended that:

- The retailer contribution should be mandatory for all retailers, should be a specified rate for every kWh generated by their SBS customers, and should be updated annually until 2016.
- A non-subsidised solar feed-in tariff should be encouraged (not mandated) by publishing a benchmark range. (Boxes B.1 and B.2 outline the rationale for our recommendations.)

11 For details of the Solar Bonus Scheme see http://www.trade.nsw.gov.au/energy/sustainable/renewable/solar/solar-scheme/solar-bonus-scheme.

12 These costs are funded through the Climate Change Fund levy which is part of the network component of retail electricity prices.

13 See IPART, *Changes in regulated electricity retail prices from 1 July 2011 – Final Report*, June 2011, p 14.

We also developed approaches and methodologies for determining the value of the retailer contribution and the benchmark range. These approaches included estimating the direct financial gain retailers make from their PV customers' exports and the wholesale market value of those PV exports at the time of day they are exported.[14]

The Government accepted our recommendations and asked us to determine the rate of the retailer contribution and the benchmark range for 2012/13 using the method detailed in our March 2012 final report. It subsequently asked us to make annual determinations to update the rate and range, starting in 2013/14, and provided us with ongoing terms of reference.

Box B.1 Why we recommended retailers contribute to the cost of the Solar Benefit Scheme

In our 2012 review, we recommended retailers be obliged to contribute to the costs of the Solar Bonus Scheme because they make a direct financial gain from their SBS customers' exports. Obliging them to contribute this gain – rather than keeping it or passing it on to SBS customers – offsets some of the costs of the scheme, which would otherwise be fully funded by a levy included in retail electricity prices.

Retailers make a financial gain because when they supply the electricity generated by their SBS customers to other customers, they avoid some of the costs they would otherwise incur. These include electricity purchase costs, National Energy Market fees and energy losses. Retailers make a financial gain from non-SBS customers for essentially the same reason.

14 IPART, *Solar feed-in tariffs, Setting a fair and reasonable value for electricity generated by small-scale solar PV units in NSW – Final Report*, March 2012, pp 11-13.

Box B.2 Why we recommended voluntary feed-in tariffs and a benchmark range

In our 2012 review, we considered making it mandatory for retailers to offer non-subsidised solar feed-in tariffs to non-SBS customers. We also considered making it mandatory for them to offer these tariffs at a specified rate or within a specified range. However, we found that these more 'heavy-handed' options created a risk that retailers would choose not to supply these customers, or would only supply them on uncompetitive terms if the rate was set too high. In contrast, if a mandatory rate was set too low customers may not receive the full value of their PV exports. Thus, they were not consistent with our terms of reference, which required us to recommend a mechanism that supports competition in the market.

We concluded that encouraging retailers to voluntarily offer a fair and reasonable unsubsidised feed-in tariff by publishing an annual benchmark range was most consistent with our terms of reference. We considered that this would:

- help customers understand the feed-in tariff they could potentially receive in the coming financial year
- help customers make informed decisions about installing a PV unit and assess retailer offers
- increase the competitive pressure on retailers to offer a fair and reasonable feed-in tariff while minimising the risk of regulatory error.

In general, we don't consider it necessary to regulate prices for optional services like solar PV. For example, we have never regulated the green premium that customers on regulated prices pay when they choose for a proportion of the electricity they use to come from renewable or 'green' sources.

Most of the larger retailers in NSW do offer an unsubsidised feed-in tariff on certain products. Therefore, most non-SBS customers are likely to have access to a market offer that includes such a feed-in tariff.